Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of driving the coil of an electrohydraulic valve with a pulse width modulator drive, comprising:

transmitting a feedback signal to a digitizing device that is electrically connected to the electrohydraulic valve;

sampling the feedback signal within the digitizing device to create a plurality of signal samples within one pulse width modulator cycle;

transmitting the plurality of samples to an accumulator;

averaging the plurality of samples within the accumulator to create an average value; and

transmitting the average value to a closed loop control algorithm that generates a pulse width signal to drive the coil of the electrohydraulic valve;

wherein the accumulator resets when the algorithm sends the pulse width signal to the coil of the electrohydraulic valve such that the method of driving the coil of an electrohydraulic valve with a pulse width modulator drive starts over again for a next pulse width modulator cycle.

2. (original) The method of claim 1 wherein the digitizing device is an AtoD converter.

3. (original) The method of claim 1 wherein the digitizing device is a DSP.

4. (original) The method of claim 1 wherein the digitizing device is a micro controller.

5. (original) The method of claim 1 wherein the algorithm is a PI algorithm.

6. (original) The method of claim 1 wherein the algorithm is a PID algorithm.

7. (cancelled)

8. (previously presented) A method of driving a pulse width modulator comprising:
transmitting a feedback signal from the pulse width modulator to a finite impulse response filter;
calculating an average current in the signal within one pulse modulator cycle with the finite impulse response filter; and
generating a pulse width signal in response the average current in the signal via an algorithm.

9. (previously presented) A method of driving the electric coil of a machine with a pulse width modulator comprising:
transmitting a feedback signal to a digitizing device that is electrically connected to the electric coil of the machine;
calculating the amount of average current in the coil within one pulse width modulator cycle with the digitizing device;
transmitting the average current amount to an algorithm;

generating a pulse width signal in response to the average current in the coil with the algorithm.

10. (previously presented) The method of claim 1 wherein the digitizing device is a finite impulse response filter.